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ABSTRACT

Computer-assisted instruction (CAI) is investigated as a means to develop a consistent and efficient training program for student library assistants. Student workers are an important part of the academic library's workforce, but student turnover is frequent, the training in repetitive tasks is time consuming, and varying student schedules may make student training inconsistent. A literature review indicated that a number of CAI programs have been successfully developed to train student assistants in public service areas, but little has been done in the technical services area. Filing in the card catalog was identified as a repetitious task requiring a great deal of training time, and a SuperPILOT based program was developed to teach students to file in a dictionary catalog. The program, "Filing in the Special Collections Card Catalog," has three units: terminology, basic rules, and a comprehension check that integrates the rules. Students who had filed previously felt they had a better understanding of the rules after using the CAI lesson, and students without filing experience enjoyed the non-traditional approach to learning a library skill. (17 references) (EW)

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CAI FOR STUDENT ASSISTANTS

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ABSTRACT

Student workers are an important part of the academic library's work force. Yet, student turnover is frequent and the training in repetitive tasks is time consuming. Also, because of their variable, part-time schedules, students training may be inconsistent. Computer assisted instruction (CAI) was investigated as a method to develop a consistent and efficient training program. A literature review indicated that a number of programs had been successfully developed to train student assistants in public service areas, but little had been done in the technical services area. Filing in the card catalog was a task identified as being repetitious and requiring a great deal of training time. Therefore, a SuperPILOT based program was developed to teach students to file in a dictionary catalog. The benefits of CAI for student assistant training as well as an overview of the development of a CAI program for an academic library will be discussed.

Computer assisted instruction (CAI) has been used for bibliographic instruction with moderate success in academic libraries during the past twenty years. Early proponents of library based CAI modules include Marina Axeen, developer of a

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PLATO based library skills course at the University of Illinois, and Patricia Culkin, designer of both a library skills program and an online searching program at the University of Denver. Their success prompted others to explore CAI as a bibliographic instruction tool. Library literature in the early seventies listed many articles extolling the virtues of CAI for bibliographic instruction. Librarians were promised freedom from repetitive training as well as easy revision of programs. As librarians developed CAI programs two drawbacks surfaced: (1) sophisticated programming was required (2) programs ran either on mainframes or minicomputers. These both required time and financial commitments from the libraries, neither of which was forthcoming. Also, many librarians, at this time, lacked computer expertise and/or access to computer programmers. Interest languished until recently when CAI reappeared in the literature not only as a tool for bibliographic instruction but also for staff training. Two factors rekindled this interest: (1) increased use of microcomputers in education/libraries (2) development of easy to use authoring programs for microcomputers.

STUDENT ASSISTANTS

As Special Collections Cataloger, Morris Library, Southern Illinois University at Carbondale, I supervised student filing in the department's card catalog. Turnover was frequent since students were often redeployed to other activities within the department. Much of my time was spent in training new students or retraining students who had previously filed. The student

filers were required to read an article on card catalog filing and were also instructed to review a brief list of filing rules. This minimal training coupled with frequent turnover resulted in uneven filing practices. It was apparent that a more efficient and consistent training program was needed to train the student filers.

Student assistants are an important part of the academic work force. Their turnover is frequent and the time spent in training them in repetitive tasks is considerable. Also their training can be inconsistent due to their variable part time schedules. White found that student assistant training in academic libraries varied from the minimum to intensive course work with examinations[1]. As Herbert Koopman laments: "the employment of student assistants is among the betes noires of every college librarian" [2].

A unique opportunity is available to Southern Illinois University's librarians interested in developing library software. Morris Library's Learning Resources Service is staffed with instructional developers who cooperate with university faculty in the development of educational software. The department's seminar on authoring programs prompted me to review the library literature for programs designed for student assistant training, specifically in technical service areas. Since CAI lets the computer play the role of instructor through generating and sequencing learning experiences relevant to some

subject matter it appeared to solve the problems associated with student training[4].

CAI AND THE ACADEMIC LIBRARY

A literature review indicated that CAI had been used primarily with bibliographic instruction in academic libraries although some institutions used it to train student assistants in public service areas. Some of the bibliographic instruction articles mentioned card filing in their explanation of card catalog use. Richard Wood developed a CAI program in 1975 that instructed students in card catalog use [5]. A PLATO program developed at Indiana University/Bloomington taught card catalog use in eight simulations, one of which included a description of the catalog and a discussion of general filing rules [6]. OCLC created some primitive CAI programs for staff training in M300 use. A program created specifically for technical services staff was developed by catalogers at the University of Florida Libraries. Entitled "How to Search OCLC" it provides a drill and practice session for staff members [7]. One article noted that CAI had been used to train staff in card filing but the information proved erroneous.

A few articles discussed student assistant training with CAI in circulation departments. Sue Rawlins reported on studies conducted at the University of Evansville (Ind.) which indicated CAI is more effective than other student training methods and it is essentially as economical as other methods [8]. Another CAI

program developed at the University of Evansville trains student assistants in the library's periodical section. Marvin Guilfoyle, author of the program, plans to develop similar programs in that library[8]. F. Jay Fuller described his experience with CAI at California State University, Chico, where liberal studies majors used their skills to write a computerized training program series that takes student trainees through the various call number systems and instructs them in the intricacies of shelving, and tests their knowledge [9]. The literature review reinforced my idea that CAI could be used to develop an efficient and consistent student training program.

CAI DEVELOPMENT

As Gratch notes: academic libraries are increasingly creating their own software, frequently as members of a campus team of programmer and instruction designer [10]. Librarians at Southern Illinois University had previously developed a bibliographic instruction program with instructional designers [11]. I presented my idea to use CAI to teach student assistants filing rules to one of our instructional designers and was provided a graduate assistant to co-develop the program.

It became apparent from our first meetings that we wanted to exploit the computer's capabilities. Effective CAI will use simulation and gaming instructional modes to promote critical thinking and problem solving skills. The program we designed, "Filing in the Special Collections Card Catalog", simulated card filing in a dictionary catalog[12]. Students were tested

throughout the program and undertook a comprehension check at the lesson's end. In this way, a student would not be merely hitting a key at the end of each screen to progress but would have to make choices and integrate the rules to successfully complete the lesson.

The following steps are critical to the development of an effective CAI program:

Task Analysis

Objectives

Script Preparation

Programming

Evaluation

Modify

Documentation

Review

Final package

Task analysis/Objectives

The task analysis required a review of written procedures by students and supervisor. This system analysis led to an outline of our objectives. Benjamin Bloom's Taxonomy of Educational Objectives provided us with six concepts to achieve in the lesson's development: knowledge, comprehension, application, analysis, synthesis and evaluation [3].

Script preparation

The script, prepared by the librarian, was reviewed by fellow librarians and students. We saw little value in page turning

applications but felt the concepts we were teaching did not lend themselves to the inquiry/discovery mode. The three CAI methods used in the lesson are: drill and practice, tutorial, and simulation. The script was prepared screen by screen with graphics incorporated into the lesson. Students found it helpful that the objectives were clearly stated at the lesson's beginning. The student had to demonstrate an understanding of each filing rule before he/she progressed.

Programming

The text, programmed in SuperPILOT, was compatible with the Apples in the library's Self-Instruction Center. Graphics and sound enhancements were added to the text. Also incorporated into the program was a system log that allowed us to monitor an individual's progress and alert us to problem questions. Frequent review prevented any major programming problems.

Evaluation

The lesson was reviewed by librarians, support staff, student assistants, faculty and students in educational design. Steinberg feels that student trials are important since they can determine a student's knowledge, skill and social character which are presumed in the lesson'". It was also very helpful to sit with the students as the went through the lesson since it provided a forum for their questions and concerns. The student evaluations, while the most positive, had many suggestions that were incorporated into the final product.

Modify/Documentation/Review

Modifications were made based on the evaluations. Another

review was conducted after the modifications were made. Finally, we were ready for the documentation. This included notes on loading a disk, student and instructor notes, evaluation sheets, and a contact sheet listing phone numbers for those who experienced problems. The program and documentation were give a final review and released.

Final package

The final program, "Filing in the Special Collections Card Catalog", has three units: terminology, basic rules, and a comprehension check that integrates the rules. Student reaction to the program was quite favorable. Students who had filed previously felt they had a better understanding of the rules after using the lesson, non-filers enjoyed the non-traditional approach to learning a library skill.

CONCLUSION

CAI programs for student assistants are advantageous to both students and librarians. Lessons are self paced and feedback is immediate. The librarian is freed from repetitive training and program revision is relatively easy. The greatest disadvantage is the initial time/cost development which averages 100 hours/one hour program. A study by Williams estimates that student assistants require 12-15 hours of professional supervision and instruction, with an additional 60 hours of learning per student[10]. The investment in an effective CAI program, while substantial, can be productive. New authoring programs are simple to use such as the MAC's HyperCard. This user friendly tool can be adapted for a variety of functions including

instructional training. It allows you to program similar kinds of repeated actions allowing for slight modification; several options for if/then and repeat control structures are built into the program [6]. Its major disadvantage is its lack of transportability. Programmers at Carnegie Mellon University have overcome the issue of transporting programs between machines. CMU Tutor has been designed to run on either a MAC or IBM PC[7]. Advances, such as this, will make it easier for librarians to develop and modify CAI programs and integrate them into their student assistant training programs.

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